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ABSTRACT

This study analyzed relationships between students' regard for one another and their mathematics achievement in cooperative learning groups in six grade 7 middle school classes. The sample consisted of 184 students (55% Hispanic, 14% Black, 27% White, 3% Asian American) in a city of Los Angeles County. Two teachers each taught three classes, two experimental, one comparison. Teacher difference emerged as the central finding of the study. Overall, students increased their regard for teammates but there was no significant increase in mathematics achievement and no correlation between regard and mathematical achievement. Observation of the classes revealed that despite the fact that the two teachers participated in the same training sessions in preparation for small group work and used identical curriculum, three factors emerged that may have contributed to the different findings for the two teachers: seating arrangements, teacher style, and instruction. This study shows that there can be a positive relationship between regard and mathematics achievement but that the teacher plays a very important role in the process. Second, there are important implications for the education of teachers. Contains 30 references. (MKR)

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PROSOCIAL ATTITUDES AND ACHIEVEMENT IN MIDDLE SCHOOL MATHEMATICS

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Abstract

This study analyzed relationships between students' regard for one another and their mathematics achievement in cooperative learning groups in six seventh grade middle school classes. Two teachers each taught three classes, two experimental, one comparison.

Teacher difference emerged as the central finding of the study. Overall, students increased their regard for teammates but there was no significant increase in mathematics achievement and no correlation between regard and mathematical achievement. By teacher the findings are opposite one another--the correlation between mathematics and regard in Teacher A's classes is significantly negative, the correlation for Teacher B's classes is significantly positive, but when taken together the correlation is not significant.

The two comparison classes mirror the overall findings. In Teacher A's comparison class there was a strong negative correlation between mathematics and regard; in Teacher B's class the correlation was strongly positive. Study of the experimental classes reveal findings not nearly so different--of Teacher A's two experimental classes, one was moderately positive, the other moderately negative; of Teacher B's two classes, one was moderately positive, for the other there was no correlation.

Observation of the classes revealed that despite the fact that the two teachers participated in the same training sessions in preparation for small group work and used identical curriculum, three factors emerged that may have contributed to the different findings for the two teachers: (1) seating arrangements, (2) teacher style, and (3) instruction.

This study shows that there can be a positive relationship between regard and mathematics achievement but that the teacher plays a very important role in the process. Second, there are important implications for the education of teachers--pre-service and in-service. What teachers take away from in-services, conferences, and pre-service teacher education, and how an instructional methodology is actually implemented in the classroom varies greatly.

Prosocial Attitudes and Achievement in Middle School Mathematics
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Small group work, often referred to synonymously as cooperative learning, is commonly understood to be an instructional methodology in which three or four students work together in small, usually heterogeneous groups, on a single task or towards a single goal, sometimes with a group reward. Over the past twenty years an impressive number of researchers have investigated the effects of small group work on student achievement and other variables. For the most part, these research studies show that small group work is beneficial on all counts (see Slavin, 1990 and Johnson & Johnson, 1989 for extensive reviews of the research).

The positive effect of small group work on students' regard for one another has been confirmed in study after study (Johnson & Johnson,1989; Solomon, 1990; Slavin, 1990). Studies of cooperative learning that further tease apart components of students' increase in liking for one another show that small group work is a powerful instructional methodology which increases regard towards traditionally low status groups--so-called "minorities", females, low achievers, and students with disabilities. Small group work increases cross-ethnic friendships (Johnson & Johnson, 1989; Slavin 1990) even when the Hispanic "minority" was in the majority (Farivar, 1991). In a study of seventh grade mathematics students in an integrated, but predominantly Hispanic middle school, Farivar (1991) found students increased their regard for female teammates significantly. In addition, small group work was effective in increasing students' regard for one another across achievement levels (Farivar, 1992). Other studies found regard for disabled students increased with small group work (Johnson & Johnson, 1989; Slavin, 1990).

Small group work is also an effective means of increasing student achievement. Johnson & Johnson (1989) found that cooperation will produce higher productivity and achievement than will individualistic efforts. Slavin (1990) found that cooperative learning methods can be effective in increasing student achievement, but only if they incorporate group goals and individual accountability. Webb et al (1990) found that small group work can have positive effects on learning outcomes in ethnically diverse classrooms.

Yet little is known of the relationship between student achievement and student regard in cooperative small groups. Studies point to the possibility of a relationship between students' regard for one another and achievement in small groups. Schmuck (1963, 1966) found that a student's perceived sociometric position within the classroom peer group had definite implications for the accomplishment of that students' academic work. He found that students who are viewed negatively by peers like themselves and

school less than do students who are liked by even several classmates. Further, Schmuck found that students who have few friends outside the class are particularly vulnerable to whether or not classmates like them. Likewise, a study of the achievement of African American students in classrooms with a majority of Anglo students (Lewis and St. John, 1974) found the performance of the African-American students was strongly influenced by their being accepted as friends by Anglo students.

Small group work provides an opportunity for increased academic performance and for positive relationships among different ethnic, gender, and achievement groups. But just working in groups does not guarantee results. Teachers have had students work in groups for many reasons for many years. And teachers have complained about groups not working for many different reasons for many years. To combat problems that can emerge in groups and to facilitate heterogeneous (racial, gender, achievement) group work, many practitioners and researchers in eduction interested in small groups have drawn on social scientist's research on small groups (Bennis and Shepard, 1956; Hare, 1973; Schmuck and Schmuck, 1983; Tuckman, 1965).

Schmuck and Schmuck's (1983) "action ideas" (what others might call activities or exercises) to teach students the skills necessary for successful group work have been applied to small group work in classrooms for over twenty years (Baker, Smith, Walters, and Wetzel, 1971; Sharan and Sharan, 1976; Aronson, 1978; Vacha, McDonald, Coburn, Black, 1979; Hoagland, Eyler, and Vacha, 1981; Johnson, Johnson & Holubec,1988; Graves and Graves, 1985; Cohen, 1986; Gibbs, 1987; Solomon, 1990). This preparation for group work, teaching students social skills--getting to know one another, learning how to work with others, practicing communication and cooperation skills, is integral to, and many would argue necessary precursors to, many approaches to small group work (Aronson, 1976; Graves and Graves, 1985; Johnson, Johnson & Holubec 1988; Cohen, 1986; Solomon, 1990 and Farivar and Webb, 1991). Although there needs to be further study of the types of activities used, as well as the intensity and duration of preparation for group work within small groups, this body of work enables us to assume that the utilization of these activities does, in fact, establish the conditions for positive intergroup contact and sets the stage for interdependent group work and increased achievement.

When students are prepared for group work, working in groups is a powerful instructional methodology for increasing student regard for one another and for increasing students learning. Unfortunately, many teachers do not adequately prepare students for group work and when students are not prepared for group work, both teachers and students complain that small groups are ineffective for learning. Teachers often forget that in our strongly individualistic and competitive classrooms that students have had very few

experiences working and learning together. Until recently students have been discouraged or forbidden to work with classmates. When their teachers have tried small group work, students may have been put in a group, or self-selected a group, which often leaves the "rejects" all in a group of their own, assigned a leader and then asked to create a mural or write a report. Consequently, there has been little opportunity to learn and practice the basic social skills necessary for group work to be successful, such as being able to disagree in an agreeable way or encouraging others to talk, or paraphrasing classmates' responses. More importantly, students have not had the opportunity to learn and practice such sophisticated skills as what to do when you either need help or when you give it. These sorts of skills are necessary for cooperative groups to be both socially and educationally beneficial. These skills must be taught and practiced. They cannot be left to happenstance. This kind of preparation for small group work takes time. And since time is a limited commodity, conflicts continuously arise between what we know about the necessity to teach students the skills necessary to be successful in groups and the pressures on teachers regarding content coverage.

In this study, students were prepared for group work in stages: (1) inclusion activities; (2) activities to teach students how to work with others including communication and cooperation skills and teambuilding; (3) activities to develop students' helpgiving and receiving skills; ad (4) activities to teach explaining skills. Preparation for group work of the sort used in the first two stages noted above is integral to, and many would argue necessary precursors to, a variety of approaches to small group work (Aronson, 1976; Graves & Graves, 1965; Johnson, Johnson & Holubec, 1988; Cohen, 1986; Solomon, 1990; Farivar & Webb, 1991). The present study added the third stage, activities to develop students' helping skills, to give students instruction and practice to increase the level of elaboration in their interaction. Drawing on the work of Swing and Peterson (1982) and King (1990, 1992), the present study adapted many of Swing, Peterson and King's principles including discussion, demonstration, practice, and feedback, in developing an expanded program to train students in pro-social behavior, communication, and helping skills.

Students in this study studied mathematics in small, heterogeneous groups. They were prepared for group work. The purpose of this study was to investigate the relationship between students' regard for one another and the group's achievement, to determine whether or not there was a correlation between regard and achievement.

Method

Sample

The sample consisted of students enrolled in six general 7th-grade mathematics classes (n=184, 55% Hispanic, 14% Black, 27% White, 3% Asian-American) in one of two middle schools (6th, 7th, 8th grades) in a city in Los Angeles County. These classes did not include seventh grade students with more advanced mathematical skills who were enrolled in a pre-algebra class. Two teachers each taught three classes. Each teacher was randomly assigned two experimental treatment classes and one comparison treatment.

The Hispanic students' English language proficiency varied widely. Some of the Hispanic students spoke no Spanish at all, approximately half of the Hispanic students were not fully English proficient and frequently spoke Spanish both informally and when working on mathematics problems in the small groups.

Two teachers took part in the study. Teacher A was a first year teacher. Teacher B had taught for many years at both the elementary and at the secondary level. Both teachers were trained initially as elementary school teachers. Neither teacher had a strong mathematics background although for Teacher A it is a subject she particularly enjoys.

Instructional Program and Design

The study took place during the spring semester 1989. With one or two exceptions in each class, students participating in the study had been in the same math class, the same period, with the same teacher the previous semester, which began September 1988. Prior to this study the students had no experience learning in small, heterogeneous, cooperative learning groups - in math class, as in other classes, they sat in rows, worked alone and spent no class time interacting with classmates.

The study was conducted in four phases. In each phase students participated in activities intended to develop their skills in working together. Phase 1 focused on inclusion activities (also called classbuilding). Phase 2 activities taught students how to work with others including communication and cooperation skills; Phase 3 activities developed students' help giving and receiving skills, in Phase 4 students learned explaining skills. Prior to each phase the teachers participated in several days of teacher training in instruction and practice that focused on the small group skills students would need for the next Phase. (A complete listing of the activities and exercises used in this project can be found in Farivar and Webb, 1991).

	Experimental Classes	Comparison Classes
Phase 1	Inclusion	Inclusion
Phase 2 (Decimals)	Learning How to Work With Others Communication & Cooperation Skills Teambuilding Small Group Work	Traditional Instruction
Phase 3 (Fractions)	Helping Giving & Receiving Skills Small Group Work	Learning How To Work With Others Communic. & Coop. Skills Teambuilding Small Group Work
Phase 4 (Percent)	Explaining Skills Small Group Work	Continuation of Phase 3

Phase 1.

During Phase 1 all classes participated in classbuilding activities designed to build inclusion such as learning classmates' names (e.g., small groups of students rearranged themselves in front of the class and the rest of the class identified each student), their interests and aspirations (e.g., each student contributed an item or two to a list, the list was reproduced, and each student had to circulate among their classmates to identify who fit each description; pairs of students interviewed each other and introduced their partner to the class). Since students would be assigned to heterogeneous groups and expected to work and learn together, the project began with activities that would enable them to know one another--to learn their classmates' names and become accustomed to interacting with a variety of classmates. These activities were intended to familiarize students with each other and to help students be more comfortable in the classroom.

As noted above, the students had no previous experience working in small groups. Few students knew one another although they had been in the same class for a semester. Those who did know each other tended to know and be friends with students from their own racial group.

Phase 2.

In this phase the experimental class class sessions consisted of a whole-class introduction of the lesson by the teacher followed by small group seatwork on problems. Students in the comparison classes worked individually on problems after the teacher instructed the whole class.

Experimental: Students participated in activities for learning how to work with others including developing basic communication and cooperation skills to learn how to interact with others and to work effectively in small groups. The teacher introduced norms

for group behavior, and the class discussed and made charts summarizing them (e.g., attentive listening, no put downs, 12-inch voices--no yelling, equal participation by everyone). Classes also discussed and made charts of social skills to use in small groups (e.g., checking for understanding, sharing ideas and information, encouraging others, and checking for agreement. Johnson, Johnson, & Holubec, 1988). Groups filled out "group processing" sheets to check whether they carried out these skills while working on their mathematics. Groups decided on a group name, made a group sign and students within the groups assumed specific roles (Johnson and Johnson, 1991) for management purposes (e.g., the "engineer" of a group was responsible for placing the group's papers in their folder at the end of the class period). No roles were used when working on problems. After the teacher's daily introduction the students worked in small groups on the problems.

Comparison: Students in the comparison condition had the same teacher introduction to the day's assignment, but worked the problems individually. In most cases, the teacher discouraged students from interacting with each other and required students to ask her for help instead of asking other students. Students were graded individually on all aspects of their work.

Phase 3.

Experimental: In Phase 3 students in the experimental classes first participated in activities to refine their emerging communication and cooperation skills. These activities were designed to develop students' ability to help each other while working on problems in small groups. For example, to learn the value of two-way communication, a student gave directions about drawing figures to the class who either was or was not allowed to ask questions. The class then discussed their success--first when they could not ask questions, and then on drawing the second figure when they could. Next, the teacher introduced specific helping skills. The teacher displayed charts of behaviors for students to engage in when they did not understand how to solve a problem (e.g., choosing someone to help, asking clear and precise questions, persisting until help was given) and when they gave help to another student (e.g., giving elaboration instead of the answer, giving specific feedback about the other student's work, asking the other student to describe or demonstrate how to solve the problem). Students also completed checklists of help-giving and help-receiving behaviors after group work to increase their awareness of which skills their groups used and where they needed to improve. As before, after a daily introduction by the teacher on the mathematical material, students worked in small groups on the class problems.

Comparison: Comparison classes began work in small groups and participated in the same activities the experimental classes had during Phase 2.

Phase 4

Experimental: Students in the experimental classes participated in activities designed to increase their ability to explain to a classmate how to solve particular mathematical problems. They performed and discussed skits (adapted from Swing and Peterson, 1985) that exemplified effective and ineffective explanations of how to solve mathematical problems.

Comparison: Classes in the comparison condition continued as during Phase 3.

Procedures

Assignment to groups. Students were teacher-assigned to heterogeneous groups of four students each that reflected the ethnic diversity, mathematical achievement level and gender differences in the classroom (Slavin, 1986). Most groups had one high achieving, one low achieving student and two middle achieving students; two or more Hispanic students, and a balance of males and females. Most groups had four members. Students remained in their assigned groups for the duration of the project. Group data were averaged for purposes of the analyses reported here.

Classroom mathematical activities. In every phase, all students and all classes used the same mathematical curriculum, classwork, homework, quizzes, and tests, and followed the same schedule. Much of the material came from a current general mathematics textbook (general mathematics for grade 7: Eicholz, O'Daffer, & Fleenor, 1989). To supplement textbook exercises and problems, some lessons were designed around realistic contexts (e.g., designing restaurant menus and ordering and paying for meals, including tip and tax). The difference between experimental and comparison classes lay in whether or not students worked in cooperative groups and degree of training they had for working with others.

Reward structure. A partial group reward structure was used to encourage students to help each other learn the material. Although all students in a group turned in their classwork, each student in a group had a randomly assigned number (1, 2, 3 or 4), and at the end of the lesson the teacher spun a spinner and the number chosen was be the paper that the teacher corrected. All students in the group received that grade for classwork. Homework followed the same format. All students turned in their homework but points earned were based on the randomly chosen number. The group mean on the posttest contributed a portion to each student's grade on the test. Quizzes and other student work were graded individually.

Class social relationship/group skills activities. Activities and exercises to teach the students different group skills were taught at the beginning of each phase. Other activities, such as reviewing class norms and social skills, were to occur after instruction and prior to beginning group work. In practice, they took place more frequently at the beginning of each phase, particularly in Teacher B's class, and tapered off to about twice a week near the end of each phase. The final five minutes of the class period was supposed to be devoted to a whole-class review of the group's use of group work skills. In reality, this took place about twice a week.

Mathematics Achievement Tests. The general mathematical pretest consisted of 11 items on computation and word problems with whole numbers and was a shortened version of the posttest.

Social Relationships Tests. Students were also administered the Classroom Social Relationships Questionnaire prior to Phase 1 and at the end of Phase 4. On the questionnaire each student marked one of four responses for each classmate: "good friend", "OK to be around", "don't know the person", or "pass".

Results

Social Relationships

Overall. Overall, using group averages, results of a dependent sample t-test indicate that there was always a significant increase in regard for fellow teammates (t (43) = -6.03, p < .001) from Time 1 to Time 2.

By teacher. For both teachers, using group averages, there was a significant increase in regard from Time 1 to Time 2 (Teacher A, t (22)=7.35, p<.01; Teacher B, t (18)=11.84, p<.001).

Mathematics Achievement

Overall. There was no significant increase in mathematical achievement.

Teacher A. There was a significant decrease in math achievement from Time 1 to Time 2 (t (22)=2.04, p<.05) according to a dependent sample t-test.

Teacher B. No difference existed between math achievement at Time 1 versus Time 2 (t (18)=-41, p<-.683).

Correlation Between Mathematics and Regard

Correlations were completed using Spearman rank correlation coefficients.

Overall.There was no correlation between regard and mathematics achievement.

Teacher A: The correlation at Time 1 was not significant (.04). There was a significant negative correlation between regard and mathematics achievement at Time 2 in Teacher A's classes (r= -.26 (22) p <.05) indicating that as students'

regard for one another increased, their math achievement decreased and vice-versa.

Separate analysis of Teacher A's three classes at Time 2 indicate differences between not only the comparison and the two experimental classes, but differences between the two experimental classes as well. The comparison class had a strong negative correlation between regard and mathematics achievement (r= -0.74). The two experimental classes were opposite one another--one class had a moderate positive correlation (r=0.29) , the other a moderate negative correlation (r= -0.19).

Teacher B: Overall, there was a positive but not significant correlation between regard and math achievement at Time 1in Teacher B's classes (r=.14). At Time 2 there was a significant positive correlation between regard and mathematics achievement (r=.24, (18) p <.05).

Taken separately by class, at Time 2 Teacher B's comparison class had a very strong positive correlation (r=0.39) between regard and mathematics achievement--one experimental class had a moderate positive correlation (r= 0.21), there was almost no correlation for the other experimental class (r= -0.09).

Discussion

This study analyzed relationships between students' regard for one another and their mathematics achievement in cooperative learning groups in six seventh grade middle school classes. Two teachers each taught three classes, two experimental, one comparison.

Teacher difference emerged as the central finding of the study. Overall, students increased their regard for teammates but there was no significant increase in mathematics achievement and no correlation between regard and mathematical achievement. By teacher the findings are opposite one another--the correlation between mathematics and regard in Teacher A's classes is significantly negative, the correlation for Teacher B's classes is significantly positive, but when taken together the correlation is not significant.

The two comparison classes mirror the overall findings. In Teacher A's comparison class there was a strong negative correlation between mathematics and regard; in Teacher B's class the correlation was strongly positive. Study of the experimental classes reveal findings not nearly so different--of Teacher A's two experimental classes, one was moderately positive, the other moderately negative; of Teacher B's two classes, one was moderately positive, for the other there was no correlation.

What made the findings for the two experimental classes so different? Observation of the classes revealed that despite the fact that the two teachers participated in the same training sessions in preparation for small group work and used identical curriculum, three

factors emerged that may have contributed to the different findings for the two teachers: (1) seating arrangements, (2) teacher style, and (3) instruction.

(1) Seating arrangements: The arrangement of seats--in rows vs. groupings of four chairs was handled differently be each teacher. Although students in the comparison classes were not intended to work together until Phase 3, when students began work in small groups, Teacher B moved the students' chairs into groupings of four seats together and left that arrangement for all classes. This meant that there was no difference in seating between conditions in Teacher B's classes. Teacher A, on the other hand, moved the seats back and forth from group seating to rows depending on the class until the comparison class began group work in Phase 3. In Teacher A's classes, seating for the two experimental classes was in groups, for the comparison class, in rows.

Contact with others in close proximity as is found in small groups is an important factor in increasing regard. Watson's (1947) contact theory specifies that there must be contact on a personal as well as a task level for positive interpersonal relationships among individuals of different races to develop. While Teacher B did not specifically encourage contact among the small groups in the comparison class, and the students did not work interdependently on their class assignments, it is likely that in having a longer time together--sitting together and having the opportunity to talk informally--led to the strong positive correlation between regard and achievement in students in Teacher B's comparison class. This does not, however, address why the correlation between regard and achievement in Teacher A's comparison classes is stronger than in the two experimental classes.

On the other hand, the very strong negative correlation between regard and mathematics in Teacher A's comparison class may be due to the fact that they had the least amount of contact with one another of all of the six classes. It also may be that since the study began with classbuilding activities for all classes, students in Teacher A's comparison class may have anticipated more contact with classmates and when they returned to "business as usual", sitting in rows, working alone, they were more negative towards one another.

(2) Teacher Style: It would be difficult to find two teachers more opposite one another than these two. Teacher B was comfortable with the students, she was amicable and friendly. She bantered with the students about sports and school activities as they came into class. Students in her classes had off-task time to talk with one another. This may be the reason that in all three of Teacher B's classes there was either a positive or no correlation between mathematics and regard.

Teacher A, on the other hand, was reserved and very businesslike. It was her first year teaching, her first experience in middle school. She was not comfortable with adolescents and seemed to be "on guard" most of the time. Conversations with students prior to class were primarily related to class matters. She was not always quite sure how to handle some of the more verbal students. It may be that the increased length of time in cooperative groups coupled with additional help giving and receiving and explaining skills led to no correlation between regard and achievement in one experimental class, to a moderate correlation in the other.

(3) Instruction: There were profound differences between the two teachers' instructional styles. Teacher A's introductions to the lessons were well thought out, precise and very lengthy. Her lesson plans noted, in detail, each step of the lesson. She carefully modeled how to lay out problems, described principles and procedures and asked the class for answers. She left examples on the overhead. The lesson took time and students in the experimental classes had little time to work together in groups. Having limited time to work with one another on the mathematics assignment, and it being the first opportunity in this class for interaction, students in the experimental classes may have spent much of their limited group time getting to know one another and less time working together on the assignments. Yet considering the strong negative correlation between regard and achievement in the comparison class, having less time to work together was still more beneficial than working alone.

Teacher B's lesson introduction was short and not very well planned. She gave a brief overview of how to solve the problems and then asked students questions about how they would answer the problem. Groups then worked together to solve sample problems after which the class discussed the answers. Then the groups worked for the remainder of the period on the assigned classwork problems. The introduction to the lesson was short. Students in Teacher B's classes had more time to work with one another on the problems than did the students in Teacher A's class. As they worked together on their mathematics, students interacted with one another and got to know each other.

Taken together, these three factors--seating arrangements, teacher style, and instruction appear to had a strong influence on the correlation between regard and achievement. These findings are particularly noteworthy because contrary to what one might expect from the findings, Teacher A was stronger in math and more organized than Teacher B. Teacher B, on the other hand, had more classroom experience that Teacher A. This study indicates that lesson precision and teacher math competence are not necessarily important factors in mediating the relationship between students' regard for one another and their math achievement.

Implications and Future Research

This study has important implications for cooperative small group work and for future research in cooperative learning. First, it shows that there can be a positive relationship between regard and mathematics achievement but that the teacher plays a very important role in the process. Students in this study were prepared for group work but were not always allowed enough time to work together. It may be that when teachers spend too much time in direct instruction it limits the time students have to work together. When rushed in their work, students cannot attend to interpersonal relationships and the assignment, one or the other gets short shrift and the students end up not liking one another, not working well together, or not completing their assignments. This, in turn, limits what they learn.

Second, there are important implications for the education of teachers--pre-service and in-service. The teachers in this study received identical preparation in cooperative learning--specific guidelines in how to work with the students and directions in how to conduct the activities to prepare the students for group work. Yet the students had completely different experiences depending on which teacher they had. What teachers take away from in-services, conferences, and pre-service teacher education, and how an instructional methodology is actually implemented in the classroom varies greatly.

This study averaged students' regard and achievement scores. Future research will study individual students and use actual transcripts of students' working together in an attempt to determine factors which relate directly to students' success and/or failure in small group work. Finally, intensive study of particularly successful and unsuccessful groups will shed light on factors that make small group work work, and factors that prevent small group work from being successful.

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Table 1

Spearman Rank Correlation Coefficients
Between Mathematics and Regard by Teacher - Time 2

Teacher A	Teacher B
r= -.26 (45) p <.05	r=.24, (45) p <.05

Table 2

Spearman Rank Correlation Coefficients
Between Mathematics and Regard byTeacher by Class - Time 2

	Teacher A	Teacher B
Comparison Class	r= -0.74	r= 0.39
Experimental #1	r= -0.19	r= 0.21
Experimental #2	r= 0.29	r= -0.09